

IN THE CLAIMS

The pending claims are as follows:

1. (original) A method of manufacturing an optical data storage medium, comprising at least one substrate and a plurality of layers deposited on the substrate, including at least one of a transparent spacer layer and transparent cover layer, which layer is provided by applying a liquid onto the rotating substrate and rotating the substrate further in order to spread out the liquid into a layer substantially uniformly between an inner radius r_i and an outer radius r_o , and solidifying the liquid layer by means of exposure to UV radiation, characterized in that:

- after applying the liquid onto the rotating substrate the liquid layer is heated by heating means in such a way that,
- the temperature rise of the liquid layer at r_i has a value $\bullet T_{ri}$ while,
- the temperature rise of the liquid layer between r_i and r_o gradually increases,
- the temperature rise of the liquid layer at r_o has a value $\bullet T_{ro} > \bullet T_{ri}$.

2. (original) A method as claimed in claim 1, wherein the temperature rise between r_i and r_o has a radial temperature profile with a shape substantially resembling the shape of a radial thickness profile resulting when $\bullet T_{ro}$ and $\bullet T_{ri}$ would be zero.

3. (Previously Presented) A method as claimed in claim 1, wherein the heating means comprise an infra red heating device projecting IR radiation onto the substrate in an area with a radius larger than r_1 for causing a desired radial temperature profile in the liquid layer.

4. (Previously Presented) A method as claimed in claim 1, wherein the heating means comprise a heated chuck on which the substrate is mounted during rotation, said chuck having a heated surface for causing a desired radial temperature profile in the liquid layer.

5. (Previously Presented) A method as claimed in claim 1, wherein the heating means comprise a directed flow of heated gas emanating from a nozzle for causing a desired radial temperature profile in the liquid layer.

6. (Previously Presented) A method as claimed in claim 1, wherein a few mm wide outer peripheral zone of the substrate is shielded by a mask in order to prevent exposure of the liquid layer in this zone to UV radiation.

7. (original) A method as claimed in claim 6, wherein after the exposure of the liquid layer in the exposed portion, the substrate is rotated at a rotation frequency sufficiently high to

substantially remove the non exposed liquid in the outer peripheral zone from the substrate.

8. (Previously Presented) A method as claimed in claim 1, wherein the exposure takes place in an atmosphere containing oxygen and at an exposure intensity leaving a few μm top portion of the liquid layer unsolidified by means of oxygen inhibition.

9. (original) An optical data storage medium manufactured using the method of claim 8, wherein additionally:

- a stamper is pressed into the unsolidified top portion of the liquid layer,
- subsequently the top portion is solidified by exposure to radiation,
- the stamper is separated from the top portion of the completely solidified liquid layer,
- further layers are provided for finalization of the optical data storage medium.

10. (original) An optical data storage medium according to claim 9, wherein the stamper is transparent to UV radiation and the top portion is solidified by UV radiation which is projected through the transparent stamper.

11. (Previously Presented) An apparatus for performing the method of claim 1 comprising

- means for receiving a substrate and a plurality of layers deposited on the substrate,
- means for rotating the substrate,
- means for providing at least one of a transparent spacer layer and transparent cover layer, by applying a liquid onto the rotating substrate and rotating the substrate further in order to spread out the liquid into a layer substantially uniformly between an inner radius r_i and an outer radius r_o , and
- means for heating the liquid layer after applying the liquid onto the rotating substrate in such a way that,
 - * the temperature rise of the liquid layer at r_i has a value $\bullet T_{ri}$ while,
 - * the temperature rise of the liquid layer between r_i and r_o gradually increases,
 - * the temperature rise of the liquid layer at r_o has a value $\bullet T_{ro} > \bullet T_{ri}$.
- means for solidifying the liquid layer by exposure to UV radiation directly after the heating step.

12. (original) An apparatus as claimed in claim 11, wherein the means for heating comprise an infrared heating device projecting IR radiation onto the substrate in an area with a radius larger than r_i for causing a desired radial temperature profile in the liquid layer.

13. (original) An apparatus as claimed in claim 11, wherein the means for heating comprise a heated chuck on which the substrate is mounted during rotation, said chuck having a heated surface for causing a desired radial temperature profile in the liquid layer.

14. (original) An apparatus as claimed in claim 11, wherein the means for heating comprise a directed flow of heated gas emanating from a nozzle for causing a desired radial temperature profile in the liquid layer.

15. (Previously Presented) An apparatus as claimed in claim 11, wherein a mask for shielding a few mm wide outer peripheral zone of the substrate is present in order to prevent exposure of the liquid layer in this zone to UV radiation.